

REMARKS

Claims 1-4, 10, and 18-39 are currently pending. Claims 5-9 and 11-17 have been canceled without prejudice. Claim 1 has been amended to incorporate subject matter from canceled claim 5. Claims 18, 19, 21, 22, and 30 have been similarly amended. Claims 2, 10, 20, 23-25, 27, 28, and 31-35 have been amended for clarification only. New claims 36-39 have been added to enhance the scope of Applicant's patent coverage and are supported by the original claims and page 9, lines 13-17, and page 11, lines 8-9, of the specification as filed. It is respectfully submitted that no new matter has been added.

The Patent Office rejected claims 1-35 under 35 U.S.C. 102(e) as being anticipated by Horvitz, U.S. Published Patent Application No. 2004/0030753.

For a claim to be anticipated, each and every non-inherent claim limitation must be found in a single reference (from MPEP 2131).

Claim 1 recites as follows:

A method comprising: specifying an addressee for an electronic message; determining a message context for the electronic message by specifying one or more conditions selected from a group consisting of a time condition of the addressee, a location of the addressee condition and at least one other condition concerning the environment of the addressee, wherein the message context defines conditions that must be satisfied before the addressee of the message can access the message, wherein the electronic message includes a context of an originator of the electronic message identifying plural conditions concerning an environment of the originator.

Claim 18 recites as follows:

An apparatus comprising: a user interface of the apparatus configured to enable a user to set a context for an electronic message by specifying one or more conditions selected from a group consisting of a time condition of the addressee, a location of the addressee condition and at least one other condition concerning the environment of the addressee, wherein the message context defines conditions that must be satisfied before the message can be accessed by the addressee of the message, wherein the apparatus is an originator of the electronic message, wherein the electronic message includes context information identifying plural conditions concerning the environment of the originator.

Claim 19 recites as follows:

A method comprising: specifying an addressee for an electronic message; determining a message context for the electronic message by specifying one or more conditions selected from a group consisting of a location of the sender condition and at least one other condition concerning the environment of the sender, wherein the message context defines conditions that must be satisfied before the addressee of the message can access the message, wherein the electronic message includes context information identifying plural conditions concerning the environment of the sender.

Claim 21 recites as follows:

An apparatus comprising: a user interface configured to enable a user to set a context for an electronic message by specifying one or more conditions selected from a group consisting of a location of the sender condition and at least one other condition concerning the environment of the sender, wherein the message context defines conditions that must be satisfied before the message can be sent to the addressee of the message, wherein the electronic message includes context information identifying plural conditions concerning the environment of the sender.

Claim 22 recites as follows:

A method comprising: receiving and storing an electronic message, having a context, in an inaccessible state within a terminal wherein the context defines conditions that must be satisfied before the message can be accessed, wherein the electronic message includes context information identifying plural conditions concerning the environment of a sender of the electronic message; detecting a context of the terminal using one or more sensors; comparing the detected terminal context with the message context; enabling access to the electronic message when the detected terminal context corresponds to the message context.

Claim 30 recites as follows:

An apparatus comprising: a memory configured to store a received electronic message and a message context that specifies one or more conditions that must be satisfied before the message can be accessed, wherein sender context information identifying plural conditions concerning the environment of the sender of the electronic message is stored in the electronic message; detection means for detecting context that varies with the environment of the apparatus and comparing the

apparatus context with the corresponding stored message context; and enabling means for enabling access to the stored electronic message when the detected context corresponds to the message context.

Claim 36 recites as follows:

A method comprising: receiving an electronic message by a specified addressee of the electronic message, wherein the electronic message includes a context of an originator of the electronic message identifying plural conditions concerning an environment of the originator and includes one or more conditions selected from a group consisting of a time condition of the addressee, a location of the addressee condition and at least one other condition concerning the environment of the addressee, wherein the message context defines conditions that must be satisfied before the addressee of the message can access a content of the electronic message; detecting the context of the addressee and comparing the context of the addressee with the message context; and enabling access by the addressee to the electronic message when the detected context of the addressee corresponds to the message context.

Claim 37 recites as follows:

An apparatus comprising: a memory configured to store an electronic message and a message context that specifies one or more conditions that must be satisfied before the message can be accessed, wherein sender context information identifying plural conditions concerning the environment of the sender is stored in the electronic message; a detector configured to detect a context that varies with the environment of the apparatus and comparing the apparatus context with the corresponding stored message context; and a controller configured to enable access to the stored electronic message when the detected context corresponds to the message context.

Claim 38 recites as follows:

A computer readable medium embodied with a computer program, the computer program having instructions which perform the operations comprising: specifying an addressee for an electronic message; determining a message context for the electronic message by specifying one or more conditions selected from a group consisting of a time condition of the addressee, a location of the addressee condition and at least one other condition concerning the environment of the addressee,

wherein the message context defines conditions that must be satisfied before the addressee of the message can access the message, wherein the electronic message includes a context of an originator of the electronic message identifying plural conditions concerning an environment of the originator.

Claim 39 recites as follows:

A computer readable medium embodied with a computer program, the computer program having instructions which perform the operations comprising: receiving an electronic message by a specified addressee of the electronic message, wherein the electronic message includes a context of an originator of the electronic message identifying plural conditions concerning an environment of the originator and includes one or more conditions selected from a group consisting of a time condition of the addressee, a location of the addressee condition and at least one other condition concerning the environment of the addressee, wherein the message context defines conditions that must be satisfied before the addressee of the message can access a content of the electronic message; detecting the context of the addressee and comparing the context of the addressee with the message context; and enabling access by the addressee to the electronic message when the detected context of the addressee corresponds to the message context.

The Patent Office asserted that Figure 4 and paragraphs 0038-0039, 0075-0077, and 0105 teach the electronic message includes the context of the originator of the message identifying plural conditions concerning the environment of the originator in rejecting claims 2-5 and that paragraphs 0009, 0029-0030, 0038, and 0106 teach determining a message context for the electronic message by specifying one or more conditions selected from a group consisting of a time condition of the addressee, a location of the addressee, and at least one other condition concerning the environment of the addressee. The Patent Office also in paragraph 9 on page 5 of the December 31 2007 Office Action asserted that claims 18-35 were rejected for the same reasons claims 1-17 were rejected.

For the convenience of the reader, paragraphs 0038-0039, 0075-0077, and 105 are reproduced below first to be discussed with reference to the subject matter the Patent Office has asserted they teach and then paragraphs 0009, 0029-0030, 0038, and 0106 are reproduced with reference to subject matter the Patent Office has asserted they teach. The Patent Office is

reminded that claims must be taken as a whole.

[0038] Bounded deferral parameters can be determined via local sensors, calendar information, an alerting type, and/or time of day, for example to determine that a user is too busy to receive an alert either now or for the next x minutes. If the deadline is reached and the alert has not yet been delivered, it is delivered at deadline. If a deadline will pass definitively (e.g., as determined from calendar information) and there is no sense in waiting for a "better time," then the alert is passed immediately as there is nothing to be gained by waiting.

[0039] Sensors can be employed for various determinations such as determining when a user is currently busy and when a user is available to receive messages. Sensors can also indicate us what the transmission reliability is. Such sensor information can be passed directly off to a central notification manager, e.g., a general notification platform that is deliberating about where to send messages, or in another application, an endpoint device itself can compute a transmission reliability (abbreviated as transrel) from its sensors and pass back the summary transmission reliability to a central notification manager which considers this in its deliberation. For example, a temperature sensor on a cell phone can indicate to the cell phone that it is indeed in a user's pocket right now, thus there is a high transrel to vibrating or ringing the cell phone to get through to the user.

[0075] Referring now to FIG. 4, a system 400 illustrates various application models 410 for endpoint devices in accordance with an aspect of the present invention. The application models 410 describe some example sensing components that can be employed by endpoint devices. Sample applications 410 include use of local calendar information at 414 to guide a device to hold alerts until after a movie or show, or other meeting has ended. At 420, microphones or other sound receptors can be employed to sense when someone has stopped speaking, or other loud background noise, e.g., car driving noise, car radio, etc.--attempt to defer alert until a period of quiet greater than t within a bound. At 424, motion devices such as accelerometers sense when a car has stopped, e.g., at a red light or stop sign for an alert to be rendered, e.g., within a bound; person has stopped walking, talking, etc.

[0076] In one example, applications consider the notion of ringing after bound is reached and then again as backup after quiet, etc. or other sensor condition. Another case waits until a person is in proximity or has touched a device before delivering a notification. Application models 410 can also consider automated deferral of phone In a simple case: Silence

first few when rings quiet, while waiting for speech to stop. A more elaborate case employs an agent picking up a phone if a user is sensed to be temporarily busy and asking the user to hold on for just a bit (the bounded deferral for a call), then buzzing through when either user has stopped speaking or the bound has been reached, (e.g., a minute) . . . coupling this, with, "please hold on for just another 30 seconds.. still trying." If this fails, directing callers to an answering machine or piping the caller through to the user. This concept can be coupled with performing phone ringing deferral only for special people or people within specially indicated groups ("People I am meeting with within an hour, etc.") Other sensors that may be employed by endpoint devices include Global Positioning Systems (GPS) at 430, 802.11 signal strength sensors at 434, infrared proximity sensors at 440, and touch sensors at 444.

[0077] FIG. 5 illustrates an example endpoint device 500 in accordance with an aspect of the present invention. The endpoint device 500 includes a sensing personal digital assistant (PDA), outfitted with multiple perceptual sensors, including proximity, motion, and touch sensors. In the background at 510, accelerometer signals are displayed showing a motion fingerprint of a user walking while looking at the device 500. As highlighted in FIG. 5, small devices can be made aware of the attentional status and location of users--and transmitting local sensor information to inform a central Notification Manager, performing entirely local notification management and related services based on observations, and/or performing a combination of central and local deliberation about notification. In the latter case, the central Notification Manager makes general decisions about routing, and relies on the endpoint device to perform precision targeting of the timing and alerting modality, based on local sensing and reasoning.

[0105] Turning now to FIG. 15, a system 1500 illustrates how a notification engine and context analyzer function together according to an aspect of the present invention. The system 1500 includes a context analyzer 1522, a notification engine 1524, one or more notification sources 1 through N, 1526, 1527, 1528, a prioritization system 1530, which can operate as a notification source, and one or more notification sinks, 1 through M, 1536, 1537, 1538, wherein N an M are integers, respectively. The sources are also referred to as event publishers, while the sinks are also referred to as event subscribers. There can be any number of sinks and sources. In general, the notification engine 1524 conveys notifications, which are also referred to as events or alerts, from the sources 1526-1528 to the sinks 1536-1538, based in part on parametric information stored in and/or accessed by the context analyzer

1522.

Paragraphs 0009, 0029-0030, and 0106 are now reproduced below (paragraph 0038 was reproduced above):

[0009] One example aspect provides for employment of bounded-deferral policies wherein a local device commits to relaying a message that it has received before a message-specific deadline is reached; the device in accordance with the invention attempts to determine or infer a most appropriate time for interruption within an allotted period. Such determination or inference can employ statistical-based and/or probabilistic-based and/or utility-based (e.g., benefit of interruption given cost of interruption) techniques. Devices in accordance with the subject invention can employ various sensing modalities (e.g., MEMS-based sensors, temperature sensors, accelerometers, gyroscopes, light-based sensors, time-based sensors, GPS, 802.11 signal strength, infrared proximity detectors, touch sensors, . . .) in connection with learning or inferring an attentional status and/or location of users. With respect to sharing and/or sending sensed states, it is to be appreciated that all sensed states, subsets or summaries thereof can be communicated.

[0029] Bounded-deferral policies define a deadline for making a user aware of a message containing information of value to the user, where the tolerance or deferral period is dependent on a determined time-dependent urgency for the information. Deadlines for alerting the user, or deferral tolerances, are assigned to messages that are transmitted to endpoint devices such as a mobile phone or handheld computer. Such tolerances may be assigned locally, at an endpoint device or by a more central notification manager. The deferral tolerances are considered by the endpoint device, in conjunction with stored or sensed information related to a user's context and availability. Transmission reliability refers to the probability that a message will get through to a user given the situation sensed by endpoint sensors and/or other relevant information such as information about a user's appointments as stored in a calendar.

[0030] Bounded deferral policies are employed, for example, wherein a local device commits to relaying a message that the device has received before a message-specific deadline is reached. The device then autonomously determines a suitable time for interruption within an allotted period. Endpoint devices can leverage multiple perceptual sensors including GPS, 802.11 signal strength, accelerometers, infrared proximity detectors, and touch sensors, for example.

[0106] The context analyzer 1522 stores/analyzes information regarding

variables and parameters of a user that influence notification decision-making. For example, the parameters may include contextual information, such as the user's typical locations and attentional focus or activities per the time of day and the day of the week, and additional parameters conditioned on such parameters, such as the devices users tend to have access to in different locations. Such parameters may also be functions of observations made autonomously via one or more sensors. For example, one or more profiles (not shown) may be selected or modified based on information about a user's location as can be provided by a global positioning system (GPS) subsystem, on information about the type of device being used and/or the pattern of usage of the device, and the last time a device of a particular type was accessed by the user. Furthermore, as is described in more detail below, automated inference may also be employed, to dynamically infer parameters or states such as location and attention. The profile parameters may be stored as a user profile that can be edited by the user. Beyond relying on sets of predefined profiles or dynamic inference, the notification architecture can enable users to specify in real-time his or her state, such as the user not being available except for important notifications for the next "x" hours, or until a given time, for example.

The above paragraphs do not disclose or suggest "determining a message context for the electronic message by specifying one or more conditions selected from a group consisting of a time condition of the addressee, a location of the addressee condition and at least one other condition concerning the environment of the addressee;" certainly not in combination with other claimed subject matter from claim 1 such as "wherein the electronic message includes a context of an originator of the electronic message identifying plural conditions concerning an environment of the originator."

Paragraph 0077 discloses an embodiment "small devices can be made aware of the attentional status and location of users--and transmitting local sensor information to inform a central Notification Manager, performing entirely local notification management and related services based on observations, and/or performing a combination of central and local deliberation about notification." In paragraph 0077, users are described as "walking while looking at the device 500." There is no disclosure or suggestion in this paragraph of environmental information about a sender is provided in an electronic message sent to an addressee. If the notification

manager were to be considered as corresponding to the addressee, then paragraph 0077 of Horvitz fails to anticipate claim 1 as claim 1 recites “wherein the message context defines conditions that must be satisfied before the addressee of the message can access the message.” From the disclosure of paragraph 0077, Horvitz does not teach or suggest the notification manager is an addressee whose access to a message is determined based on satisfaction of conditions defined by the message context.

The other cited paragraphs 0038, 0039, 0075, 0077, and 0105 appear less relevant than does paragraph 0077. Paragraph 0038 seems to be limited to local sensors of an addressee. Paragraph 0039’s disclosure of “in another application, an endpoint device itself can compute a transmission reliability (abbreviated as transrel) from its sensors and pass back the summary transmission reliability to a central notification manager which considers this in its deliberation” if considered as a teaching of “the electronic message includes a context of an originator of the electronic message identifying plural conditions concerning an environment of the originator” would fail to provide a teaching for “determining a message context for the electronic message by specifying one or more conditions selected from the group consisting of a time condition of the addressee, a location of the addressee condition and at least one condition concerning the environment of the addressee.” Although paragraph 0075 discloses “[t]he application models 410 describe some example sensing components that can be employed by endpoint devices” and paragraph 0076 discloses “sensors that may be employed by endpoint devices”, these paragraphs do not disclose or suggest “the electronic message includes a context of an originator of the electronic message identifying plural conditions concerning an environment of the originator.” Paragraph 0105 discloses a “notification engine and context analyzer” that communicate with each other.

Where do any of paragraphs 0038, 0039, 0075-0077, and 0105 or paragraphs 0009, 0029-0030, 0038, and 0106 teach determining a message context for the electronic message by specifying one or more conditions selected from a group consisting of a time condition, a location of the addressee, and at least one other condition concerning the environment of the addressee. The bounded-deferral policies in Horvitz seem to be something set up by the receiving device and not something set by a sending or originating device.

Because Horvitz does not teach the claimed subject matter in claim 1 of both

“determining a message context for the electronic message by specifying one or more conditions selected from a group consisting of a time condition of the addressee, a location of the addressee condition and at least one other condition concerning the environment of the addressee” and “the electronic message includes a context of an originator of the electronic message identifying plural conditions concerning an environment of the originator,” Horvitz does not anticipate claim 1 or its dependent claims 2-4 and 10.

Because Horvitz does not teach the claimed subject matter in claim 18 of both “a user interface of the apparatus configured to enable a user to set a context for an electronic message by specifying one or more conditions selected from a group consisting of a time condition of the addressee, a location of the addressee condition and at least one other condition concerning the environment of the addressee” and “the electronic message includes context information identifying plural conditions concerning the environment of the originator”, Horvitz does not anticipate claim 18.

Because Horvitz does not teach the claimed subject matter in claim 19 of both “determining a message context for the electronic message by specifying one or more conditions selected from a group consisting of a location of the sender condition and at least one other condition concerning the environment of the sender” and “the electronic message includes context information identifying plural conditions concerning the environment of the sender”, Horvitz does not anticipate claim 19 or its dependent claim 20.

Because Horvitz does not disclose the claimed subject matter in claim 21 of both “a user interface configured to enable a user to set a context for an electronic message by specifying one or more conditions selected from a group consisting of a location of the sender condition and at least one other condition concerning the environment of the sender” and “the electronic message includes context information identifying plural conditions concerning the environment of the sender”, Horvitz does not anticipate claim 21.

Because Horvitz does not disclose the claimed subject matter in claim 22 of both “an electronic message, having a context, in an inaccessible state within a terminal wherein the context defines conditions that must be satisfied before the message can be accessed, wherein the electronic message includes context information identifying plural conditions concerning the environment of a sender of the electronic message” and “enabling access to the electronic

message when the detected terminal context corresponds to the message context”, Horvitz does not anticipate claim 22 or its dependent claims 23-29.

Because Horvitz does not disclose the claimed subject matter in claim 30 of both “sender context information identifying plural conditions concerning the environment of the sender of the electronic message is stored in the electronic message” and “detecting context that varies with the environment of the apparatus and comparing the apparatus context with the corresponding stored message context”, Horvitz does not anticipate claim 30 or its dependent claims 31-35.

Applicant believes that newly added independent claim 36 is not anticipated by Horvitz because Horvitz does not teach “wherein the electronic message includes a context of an originator of the electronic message identifying plural conditions concerning an environment of the originator and includes one or more conditions selected from a group consisting of a time condition of the addressee, a location of the addressee condition and at least one other condition concerning the environment of the addressee.”

Applicant believes that newly added independent claim 37 is not anticipated by Horvitz because Horvitz does not teach “a message context that specifies one or more conditions that must be satisfied before the message can be accessed, wherein sender context information identifying plural conditions concerning the environment of the sender is stored in the electronic message; a detector configured to detect a context that varies with the environment of the apparatus and comparing the apparatus context with the corresponding stored message context.”

Applicant believes that newly added independent claim 38 is not anticipated by Horvitz because Horvitz does not teach “determining a message context for the electronic message by specifying one or more conditions selected from a group consisting of a time condition of the addressee, a location of the addressee condition and at least one other condition concerning the environment of the addressee” and “the electronic message includes a context of an originator of the electronic message identifying plural conditions concerning an environment of the originator.”

Applicant believes that newly added independent claim 39 is not anticipated by Horvitz because Horvitz does not teach “the electronic message includes a context of an originator of the electronic message identifying plural conditions concerning an environment of the originator and includes one or more conditions selected from a group consisting of a time condition of the

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addressee, a location of the addressee condition and at least one other condition concerning the environment of the addressee.”

The Patent Office is respectfully requested to reconsider and remove the rejections of the claims 1-35 under 35 U.S.C. 102(e) based on Horvitz, and to allow all of the pending claims 1-4, 10, and 18-39 as now presented for examination. An early notification of the allowability of claims 1-4, 10, and 18-39 is earnestly solicited.



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